

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032719\
 Data File : VL033490.D
 Acq On : 28 Mar 2019 5:33
 Operator : SY/AP
 Sample : K1991-07DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 28 07:33:14 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
 QLast Update : Tue Mar 26 16:00:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.75	49	790911	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	2030205	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.23	117	2033023	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.57	95	1526610	9.58	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.80%

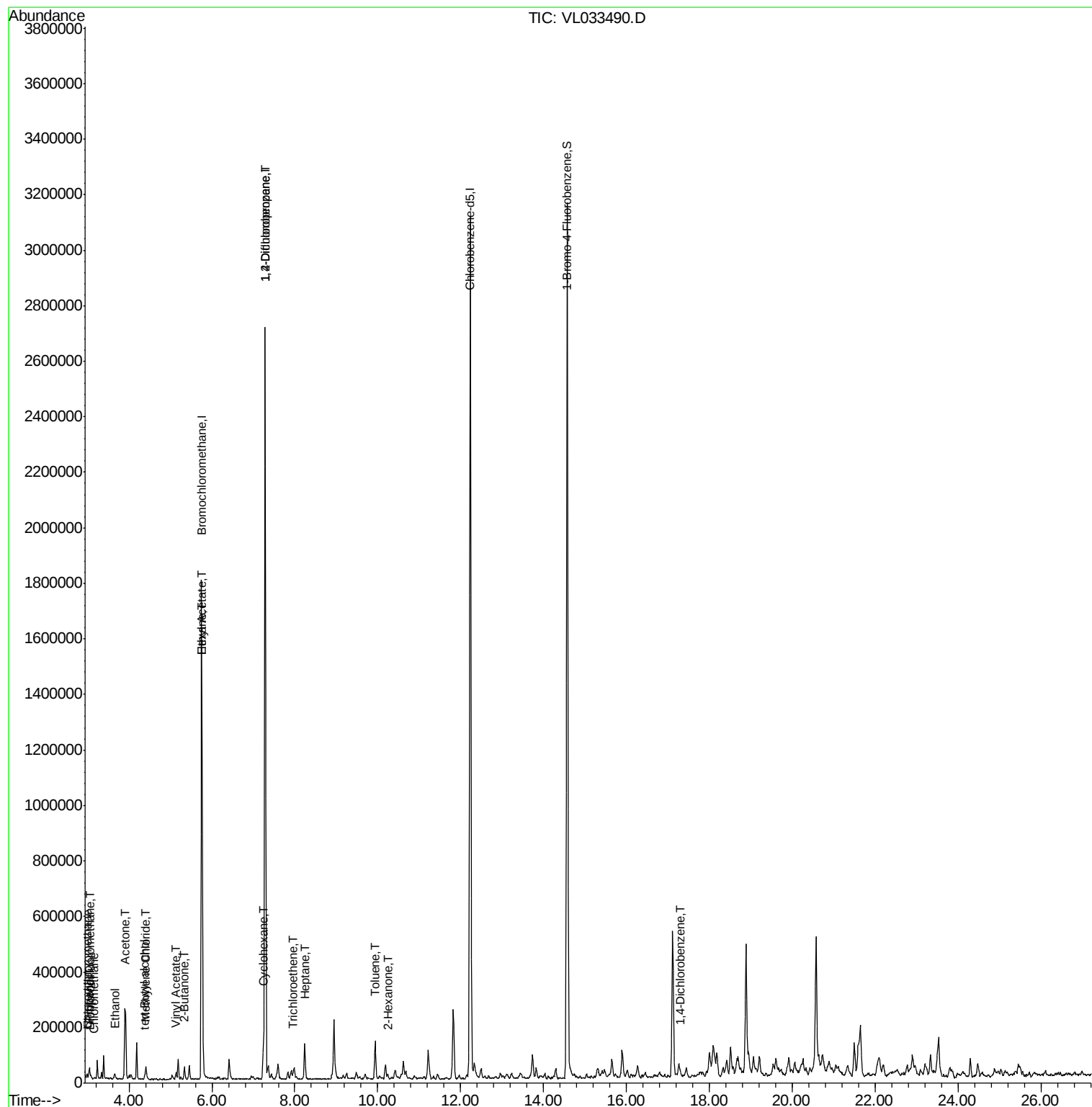
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	3717	0.032	ppbv	97
3) Chlorodifluoromethane	2.98	51	12235	0.134	ppbv #	68
4) Chloromethane	3.17	50	1180	0.024	ppbv #	43
9) Propene	3.04	41	4921	0.129	ppbv #	16
10) Heptane	8.24	43	52147	0.510	ppbv	99
13) Ethanol	3.66	45	13696	1.384	ppbv	83
15) Acetone	3.90	43	288300	3.032	ppbv	94
17) tert-Butyl alcohol	4.37	59	2629	0.150	ppbv #	73
20) Methylene Chloride	4.41	84	14114	0.350	ppbv #	83
23) Vinyl Acetate	5.13	43	5248	0.039	ppbv #	1
25) Ethyl Acetate	5.77	43	49423	0.280	ppbv #	84
26) Hexane	5.77	57	59614	0.760	ppbv #	45
30) Cyclohexane	7.24	84	23218	0.374	ppbv #	77
34) 2-Butanone	5.34	43	50167	0.411	ppbv	100
38) Trichloroethene	7.95	130	1318	0.021	ppbv #	69
39) 1,2-Dichloropropane	7.28	63	486755	7.294	ppbv #	23
51) 2-Hexanone	10.25	43	2821	0.021	ppbv #	29
53) Toluene	9.94	91	100949	0.510	ppbv	98
76) 1,4-Dichlorobenzene	17.30	146	3400	0.021	ppbv #	24

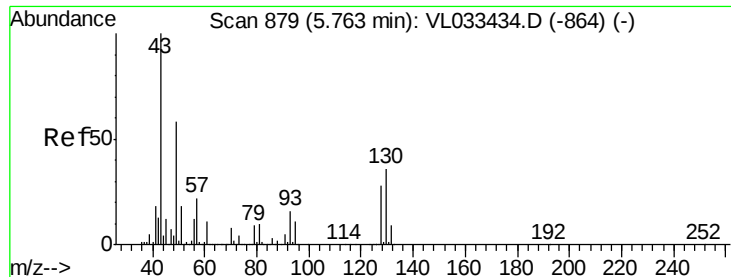
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.75 min Scan# 876

Delta R.T. -0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :
MSVOA_L
ClientSampleId :

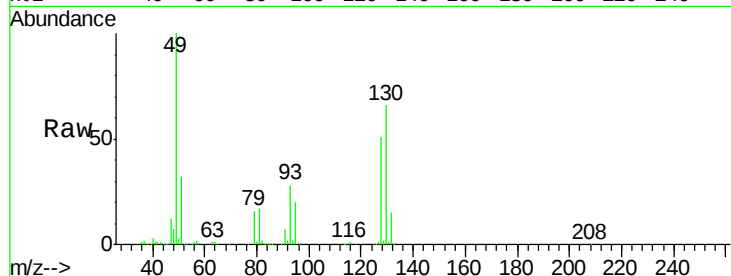
Tot Ion: 49 Resp: 790911

Ion Ratio Lower Upper

49 100

128 50.8 24.0 72.0

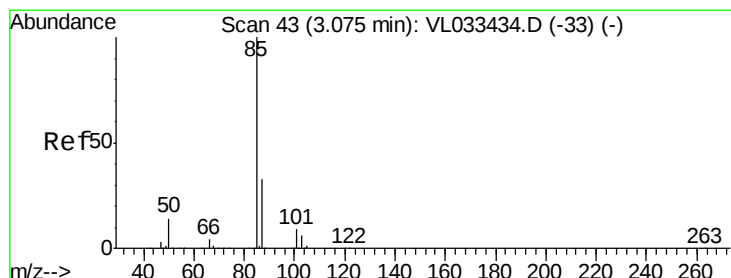
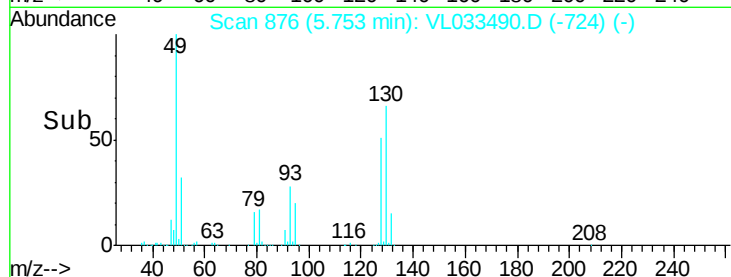
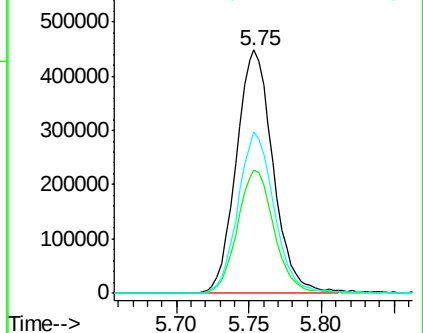
130 66.1 31.2 93.6



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.032 ppbv

RT: 3.08 min Scan# 43

Delta R.T. -0.00 min

Lab File: VL033490.D

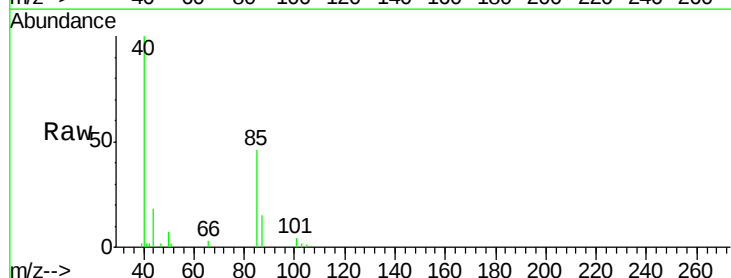
Acq: 28 Mar 2019 5:33

Tgt Ion: 85 Resp: 3717

Ion Ratio Lower Upper

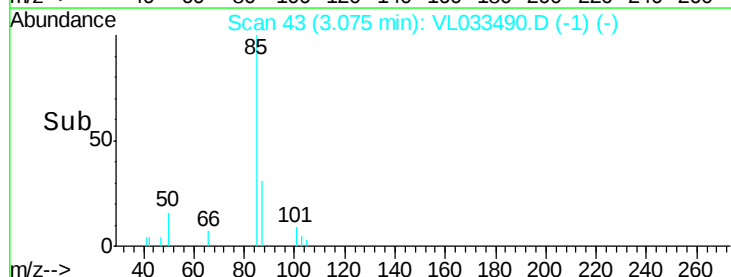
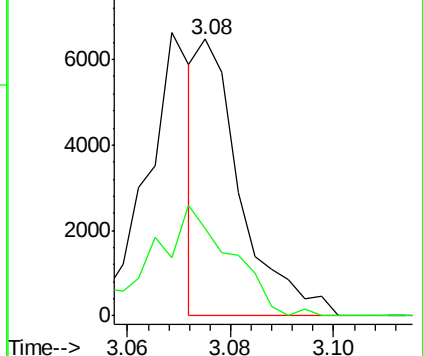
85 100

87 31.5 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.134 ppbv

RT: 2.98 min Scan# 14

Delta R.T. -0.03 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

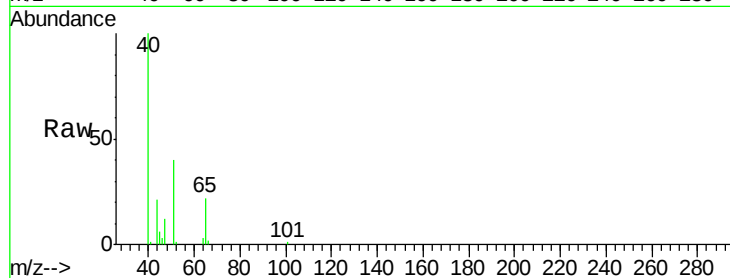
ClientSampleId :

Tot Ion: 51 Resp: 12235

Ion Ratio Lower Upper

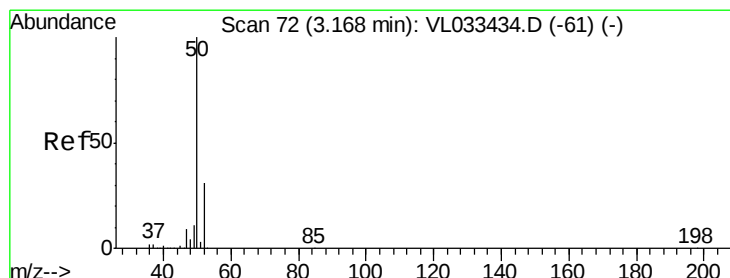
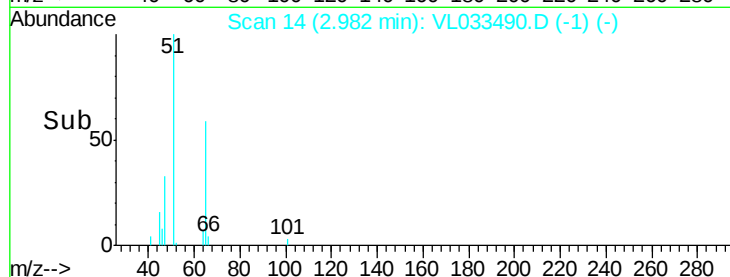
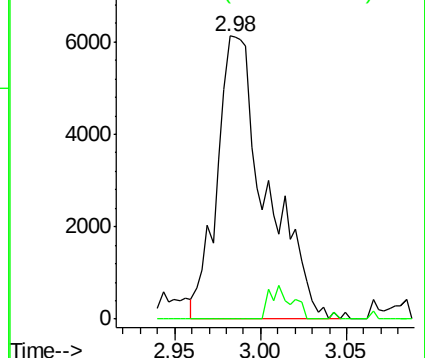
51 100

67 5.1 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.024 ppbv

RT: 3.17 min Scan# 71

Delta R.T. -0.00 min

Lab File: VL033490.D

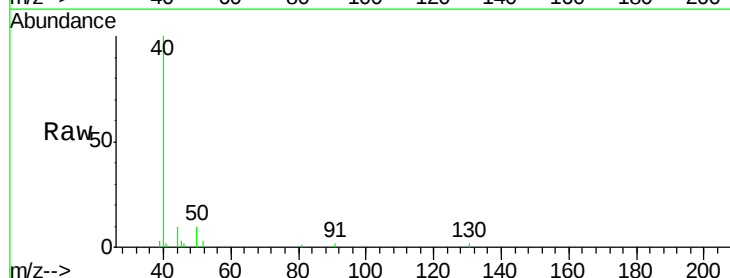
Acq: 28 Mar 2019 5:33

Tgt Ion: 50 Resp: 1180

Ion Ratio Lower Upper

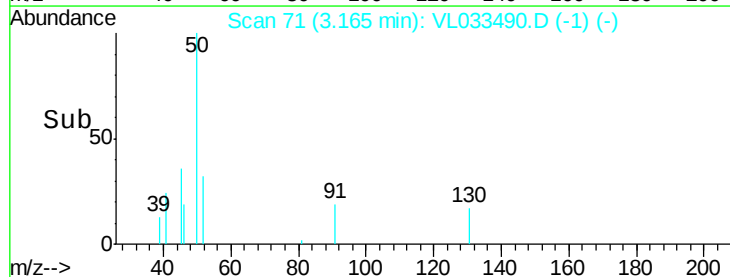
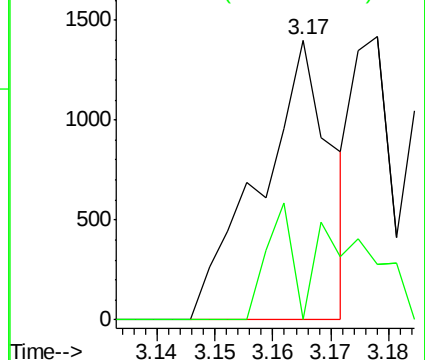
50 100

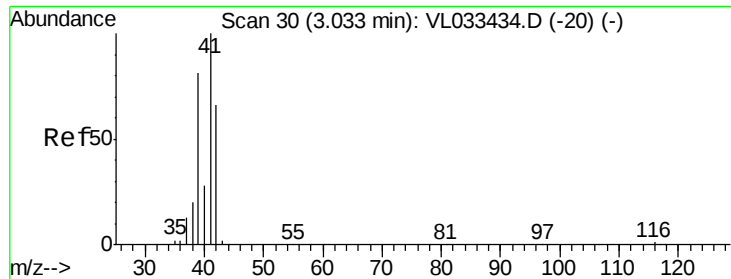
52 0.0 25.0 37.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.129 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

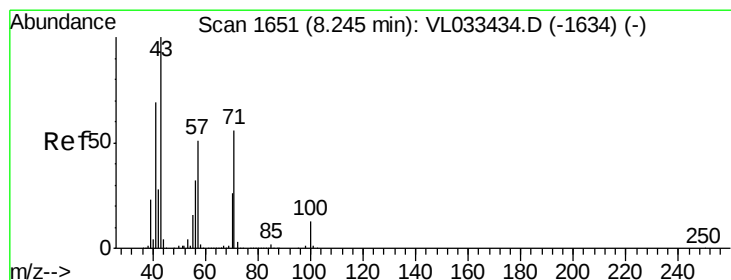
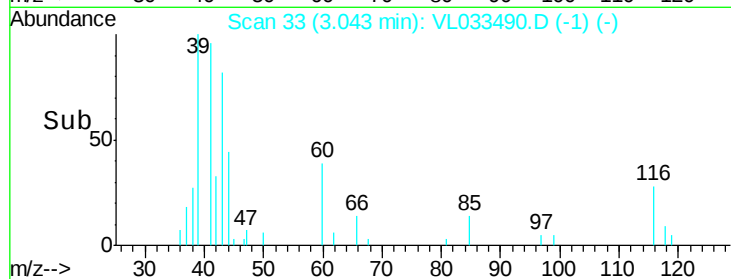
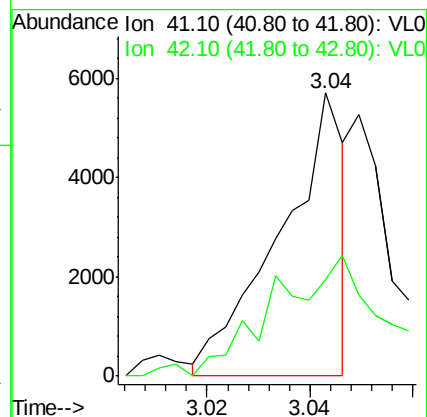
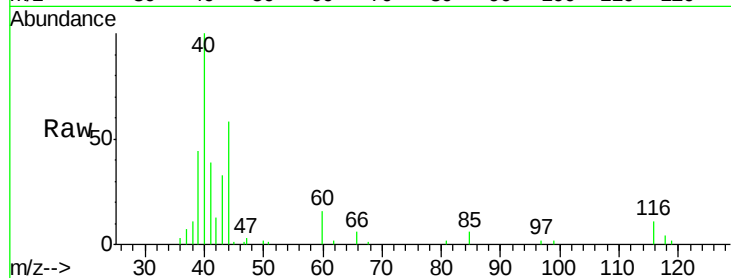
ClientSampleId :

Tot Ion: 41 Resp: 4921

Ion Ratio Lower Upper

41 100

42 0.0 53.9 80.9#



#10

Heptane

Concen: 0.510 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. -0.01 min

Lab File: VL033490.D

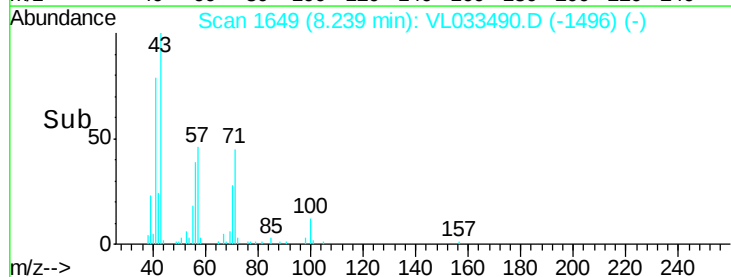
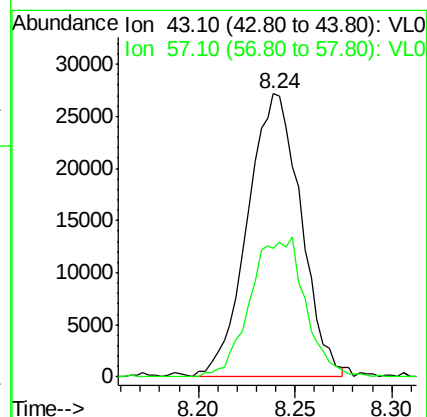
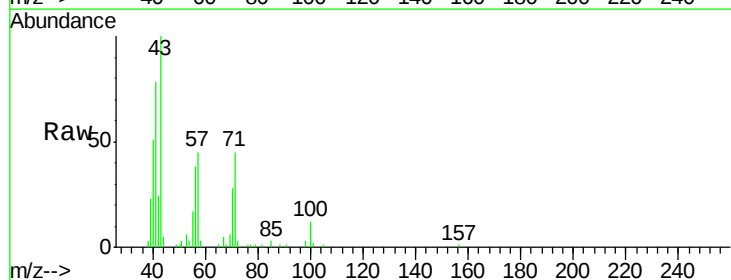
Acq: 28 Mar 2019 5:33

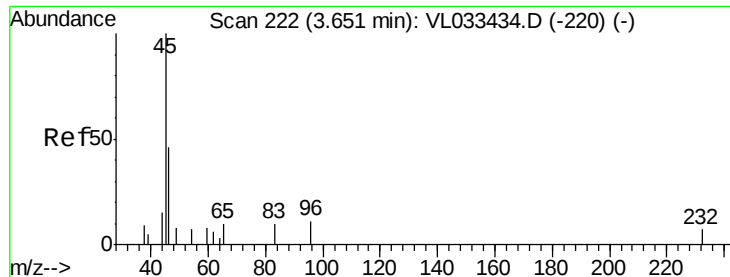
Tgt Ion: 43 Resp: 52147

Ion Ratio Lower Upper

43 100

57 50.2 40.6 60.8





#13

Ethanol

Concen: 1.384 ppbv

RT: 3.66 min Scan# 224

Delta R.T. 0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

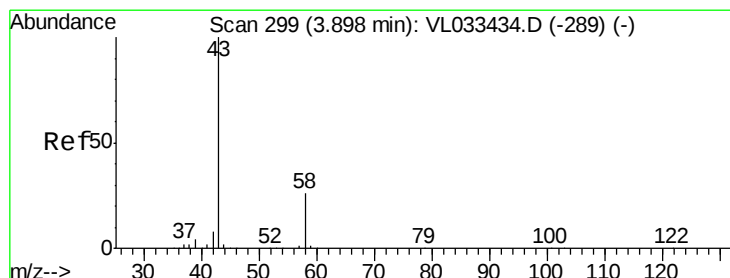
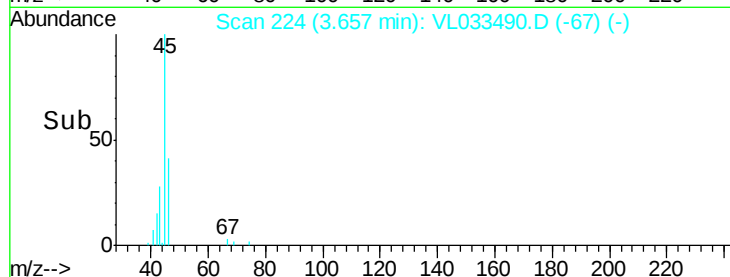
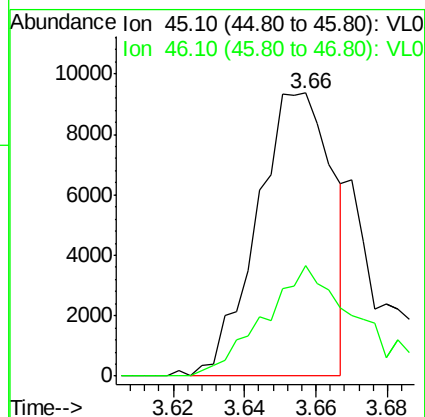
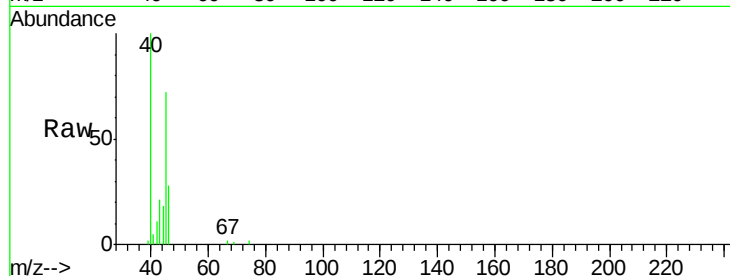
ClientSampled :

Tot Ion: 45 Resp: 13696

Ion Ratio Lower Upper

45 100

46 50.1 25.4 101.8



#15

Acetone

Concen: 3.032 ppbv

RT: 3.90 min Scan# 299

Delta R.T. -0.00 min

Lab File: VL033490.D

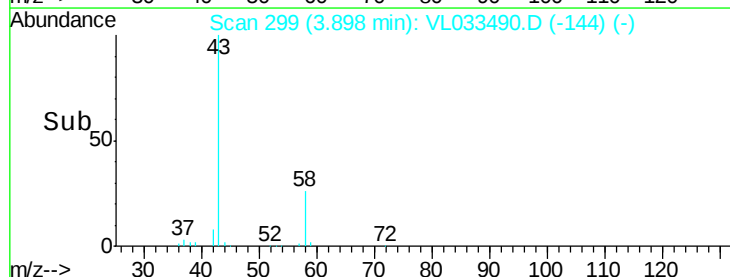
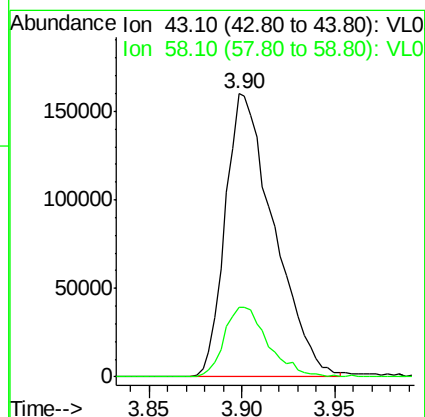
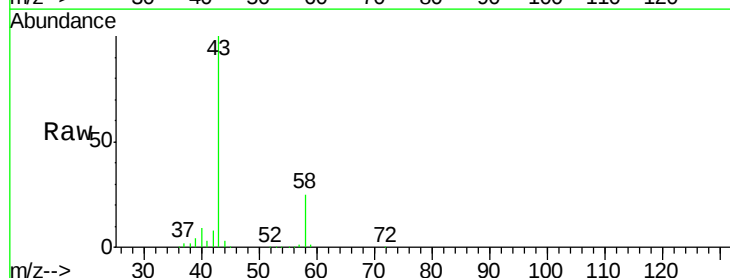
Acq: 28 Mar 2019 5:33

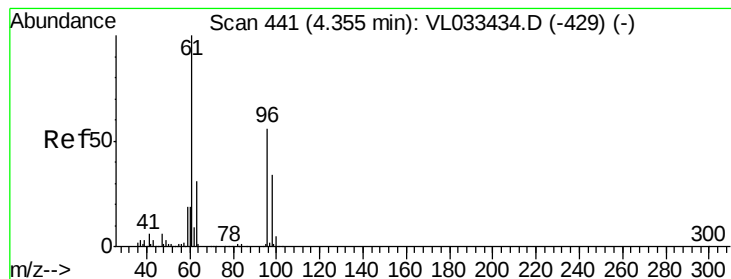
Tgt Ion: 43 Resp: 288300

Ion Ratio Lower Upper

43 100

58 22.7 20.5 30.7



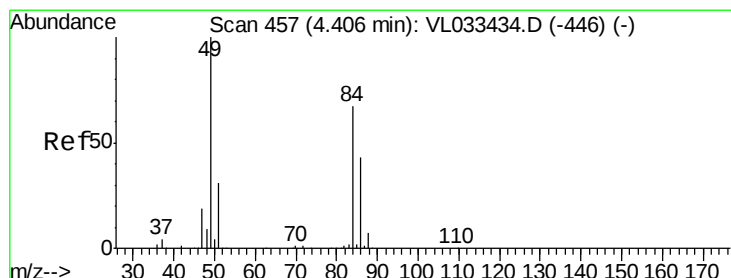
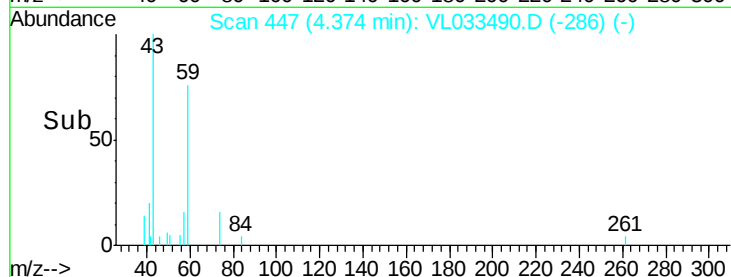
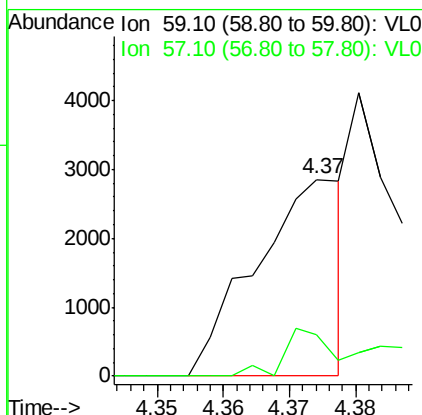
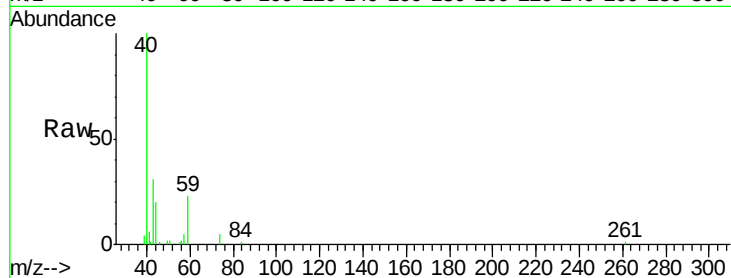


#17

tert-Butyl alcohol
Concen: 0.150 ppbv
RT: 4.37 min Scan# 447
Delta R.T. 0.02 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

Instrument :
MSVOA_L
ClientSampleId :

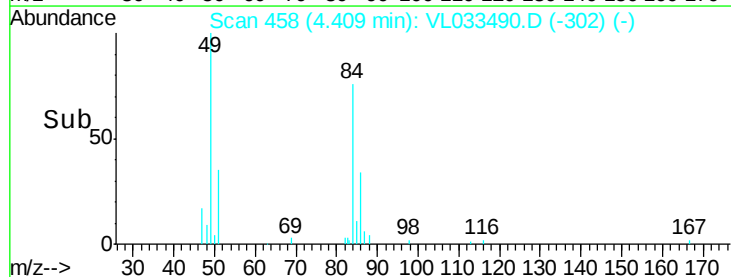
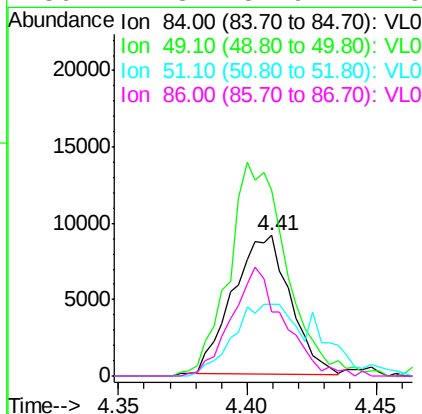
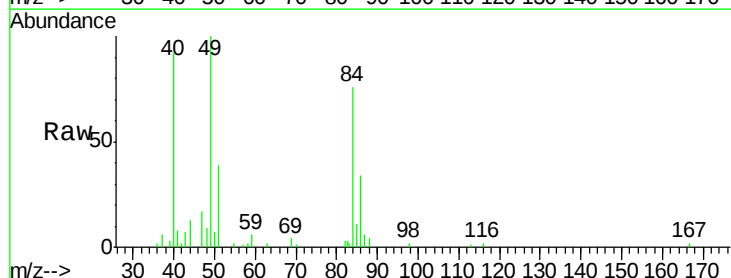
Tot Ion: 59 Resp: 2629
Ion Ratio Lower Upper
59 100
57 0.0 7.8 11.8#

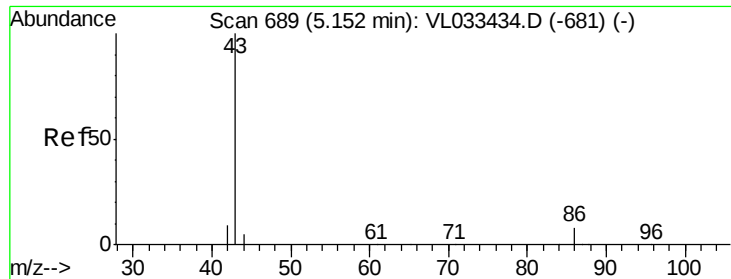


#20

Methylene Chloride
Concen: 0.350 ppbv
RT: 4.41 min Scan# 458
Delta R.T. 0.00 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

Tgt Ion: 84 Resp: 14114
Ion Ratio Lower Upper
84 100
49 130.9 120.0 180.0
51 52.2 36.7 55.1
86 44.3 51.9 77.9#





#23

Vinyl Acetate

Concen: 0.039 ppbv

RT: 5.13 min Scan# 683

Delta R.T. -0.02 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

ClientSampled :

Tot Ion: 43 Resp: 5248

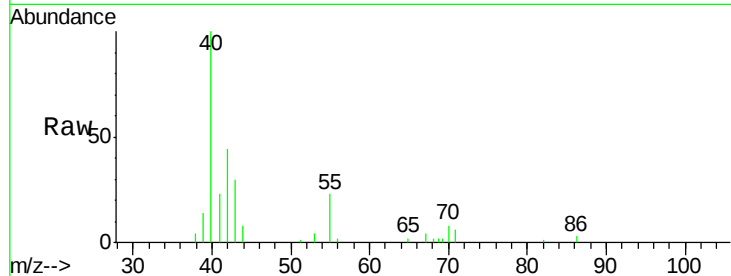
Ion Ratio Lower Upper

43 100

86 20.0 5.6 8.4#

42 236.3 8.0 12.0#

44 23.5 3.9 5.9#

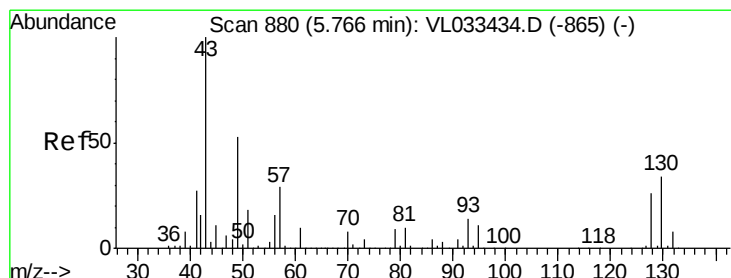
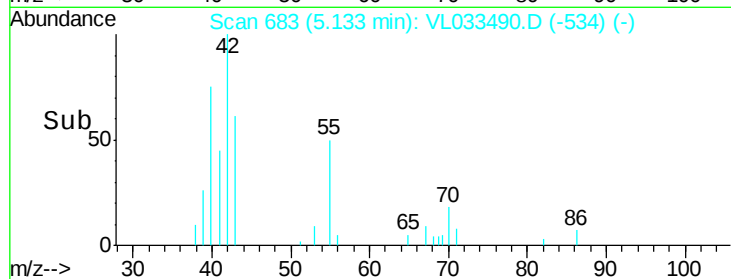
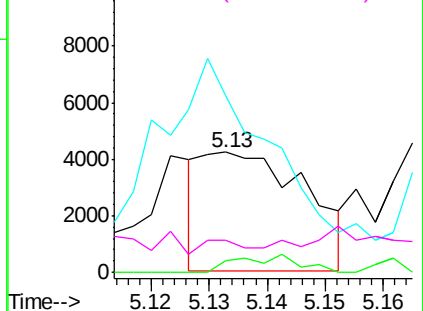


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.280 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Tgt Ion: 43 Resp: 49423

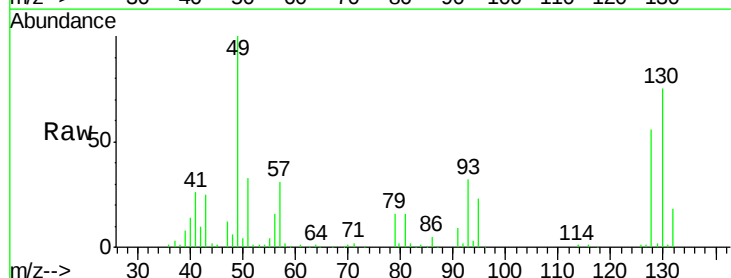
Ion Ratio Lower Upper

43 100

45 3.8 7.8 11.6#

61 2.4 7.3 10.9#

70 3.2 5.6 8.4#

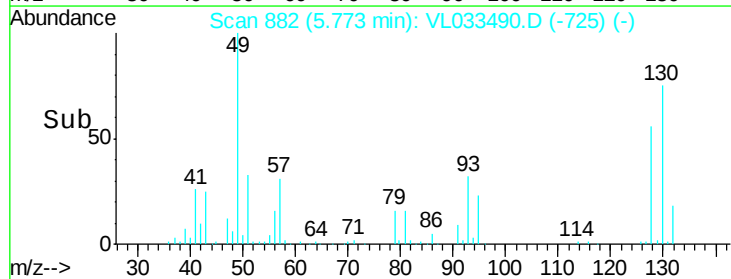
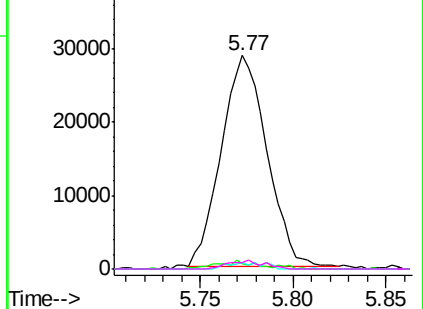


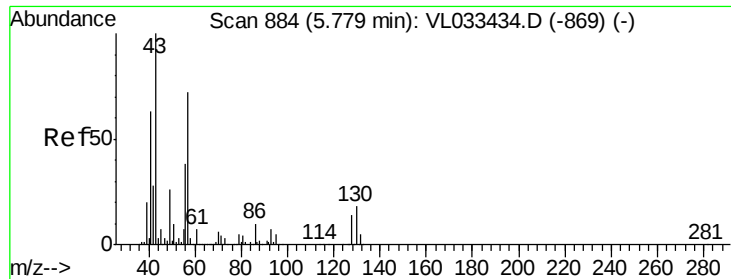
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0

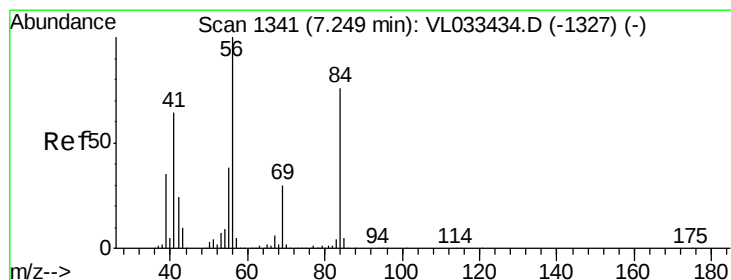
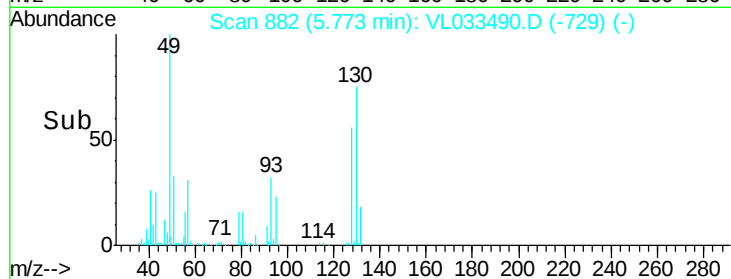
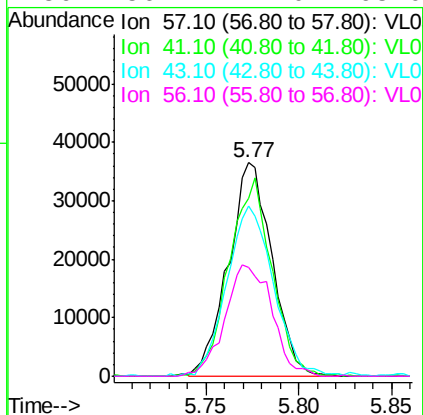
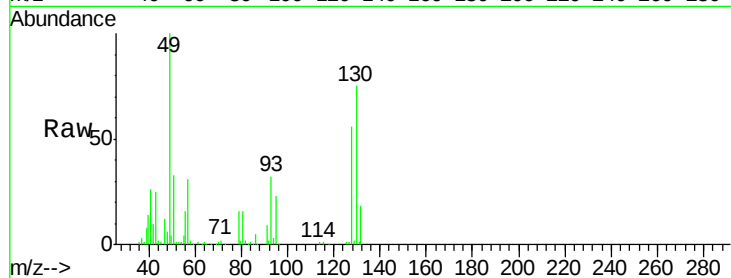




#26
Hexane
Concen: 0.760 ppbv
RT: 5.77 min Scan# 882
Delta R.T. -0.01 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

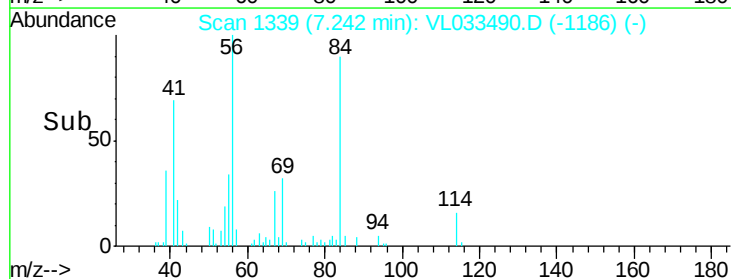
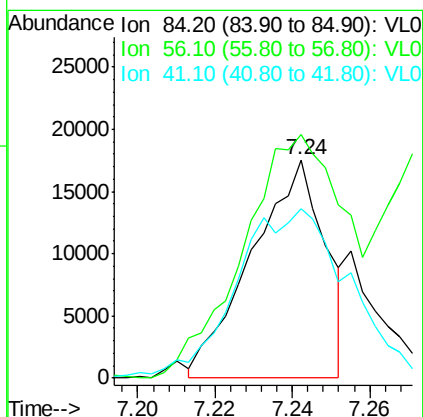
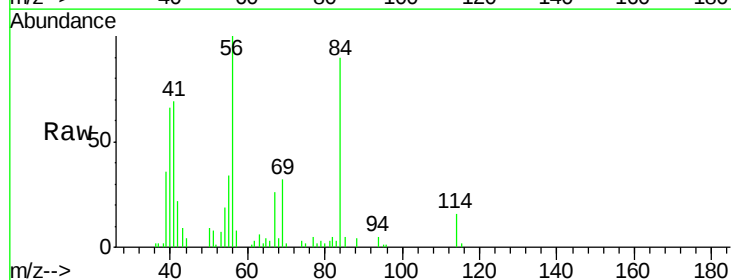
Instrument :
MSVOA_L
ClientSampleId :

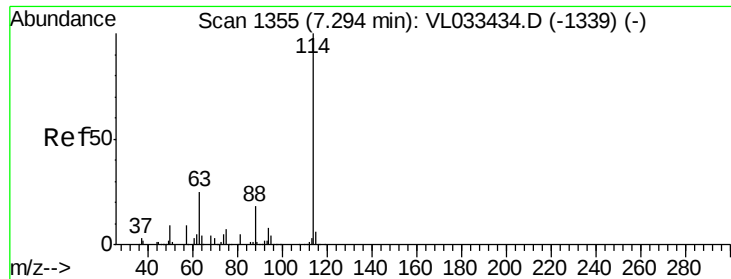
Tot Ion: 57 Resp: 59614
Ion Ratio Lower Upper
57 100
41 91.5 70.7 106.1
43 86.9 182.6 274.0#
56 56.1 42.0 63.0



#30
Cyclohexane
Concen: 0.374 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

Tgt Ion: 84 Resp: 23218
Ion Ratio Lower Upper
84 100
56 153.8 109.7 164.5
41 120.7 68.2 102.2#

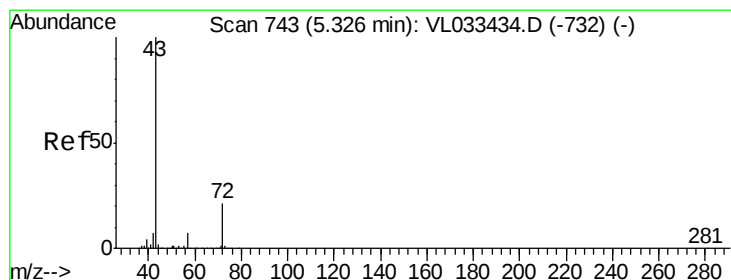
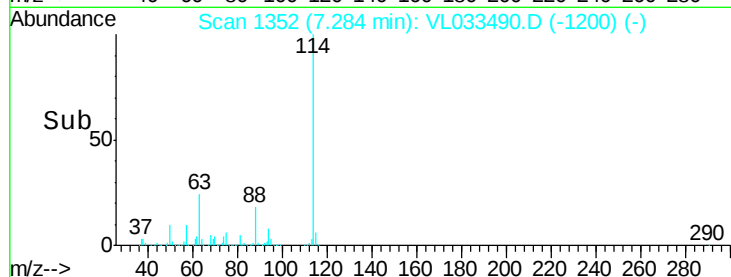
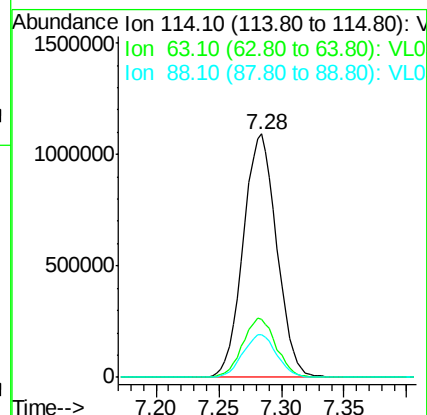
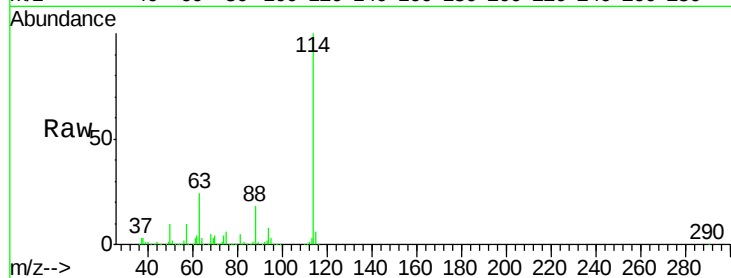




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.01 min
 Lab File: VL033490.D
 Acq: 28 Mar 2019 5:33

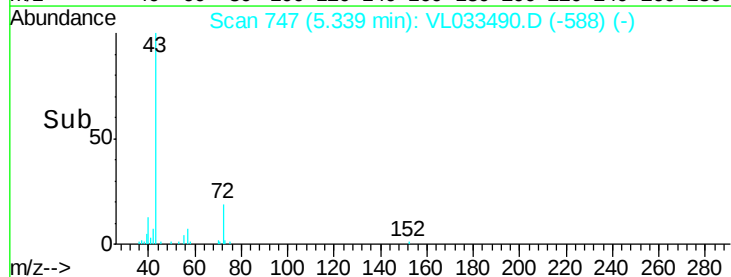
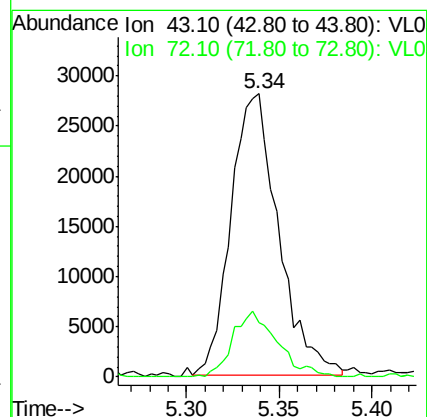
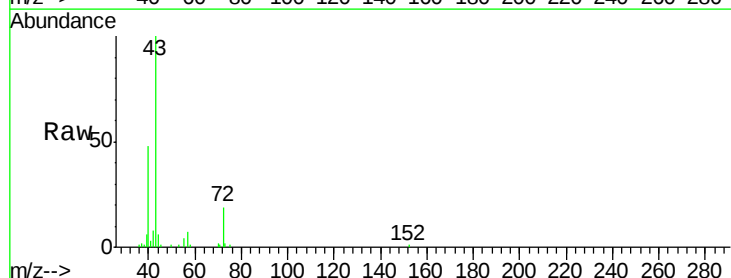
Instrument :
 MSVOA_L
 ClientSampled :

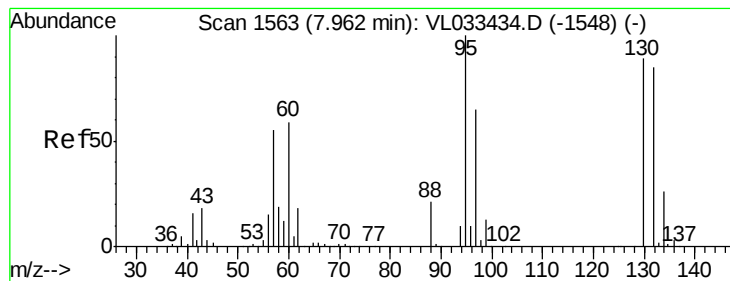
Tot Ion:114 Resp: 2030205
 Ion Ratio Lower Upper
 114 100
 63 24.4 21.5 32.3
 88 17.6 14.5 21.7



#34
 2-Butanone
 Concen: 0.411 ppbv
 RT: 5.34 min Scan# 747
 Delta R.T. 0.01 min
 Lab File: VL033490.D
 Acq: 28 Mar 2019 5:33

Tgt Ion: 43 Resp: 50167
 Ion Ratio Lower Upper
 43 100
 72 21.8 17.4 26.2





#38

Trichloroethene

Concen: 0.021 ppbv

RT: 7.95 min Scan# 1559

Delta R.T. -0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

ClientSampled :

Tot Ion:130 Resp: 1318

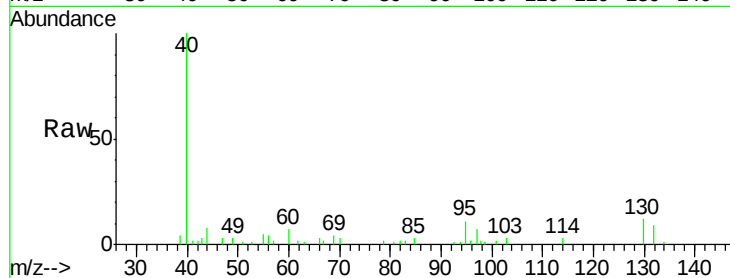
Ion Ratio Lower Upper

130 100

95 83.8 89.8 134.8#

132 60.5 76.6 115.0#

97 47.2 58.6 88.0#

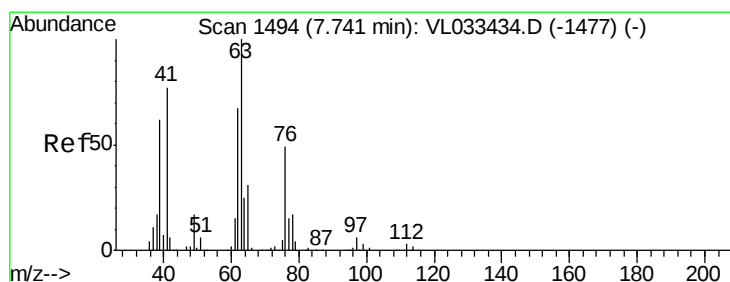
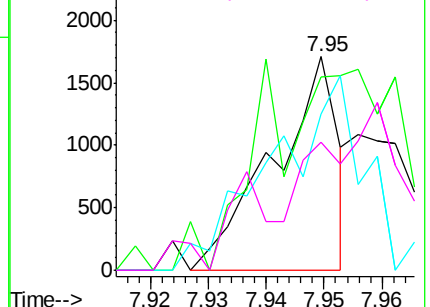
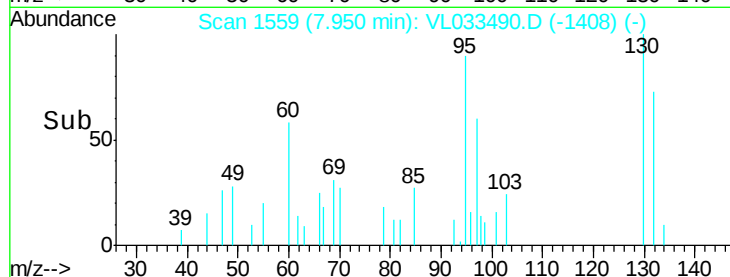


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 7.294 ppbv

RT: 7.28 min Scan# 1351

Delta R.T. -0.46 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

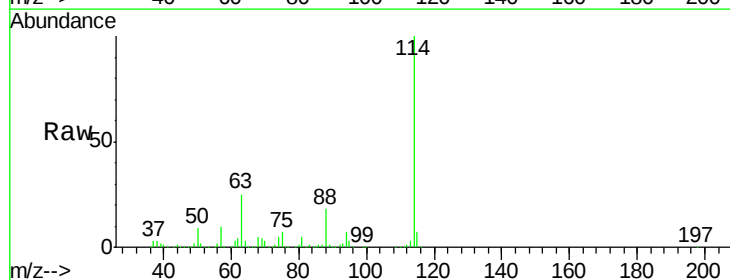
Tgt Ion: 63 Resp: 486755

Ion Ratio Lower Upper

63 100

41 0.0 61.2 91.8#

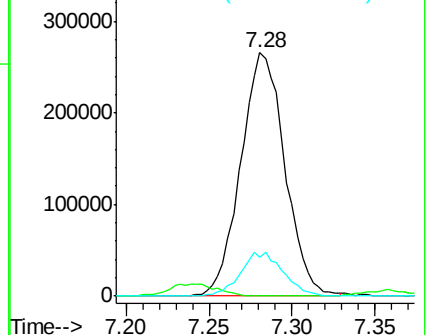
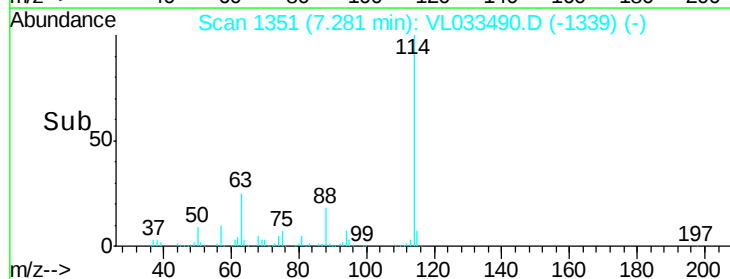
62 15.8 54.0 81.0#

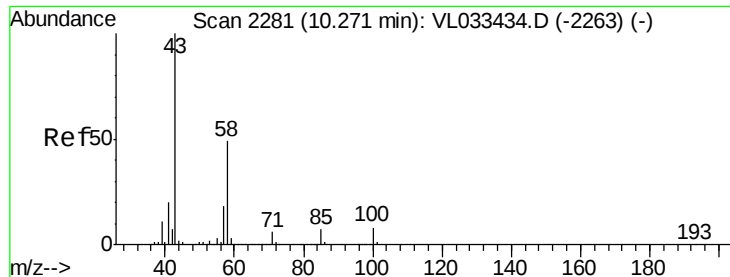


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

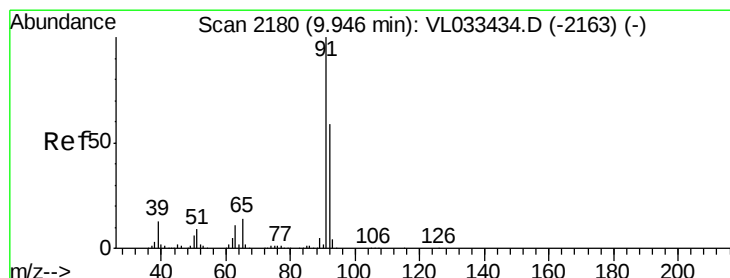
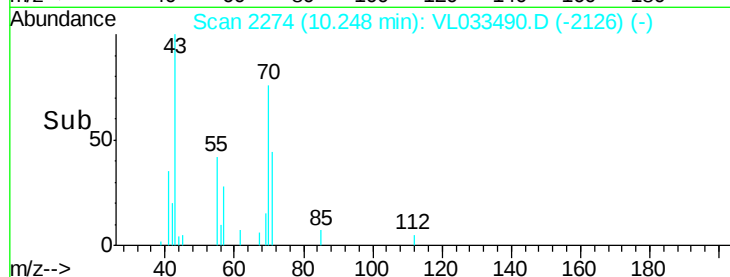
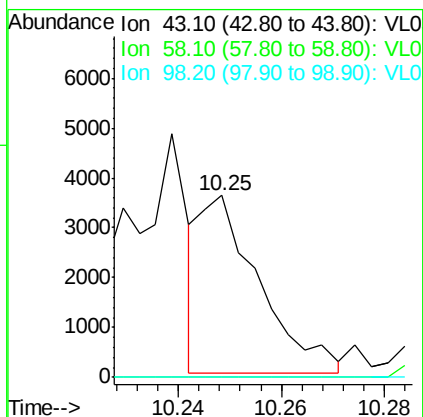
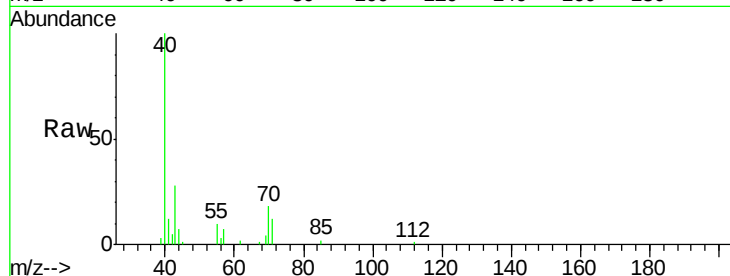




#51
2-Hexanone
Concen: 0.021 ppbv
RT: 10.25 min Scan# 2274
Delta R.T. -0.02 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

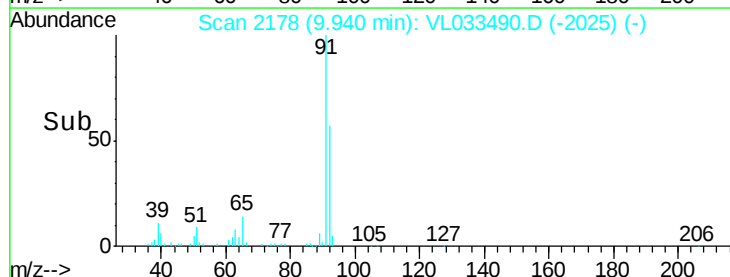
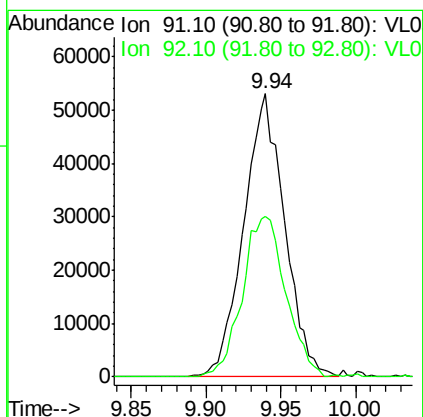
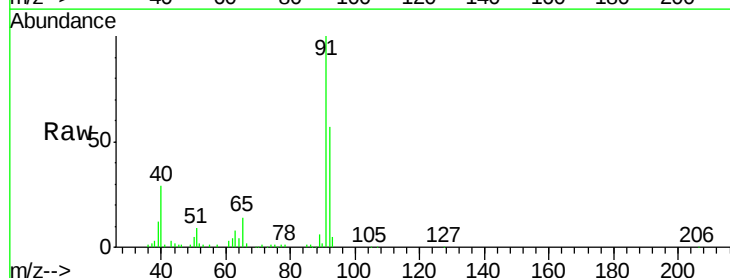
Instrument :
MSVOA_L
ClientSampled :

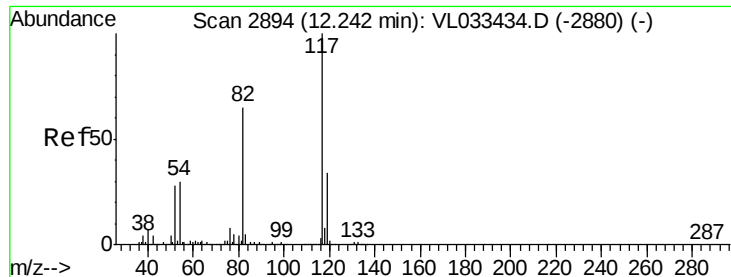
Tot Ion: 43 Resp: 2821
Ion Ratio Lower Upper
43 100
58 0.0 38.2 57.2#
98 0.0 0.2 0.2#



#53
Toluene
Concen: 0.510 ppbv
RT: 9.94 min Scan# 2178
Delta R.T. -0.01 min
Lab File: VL033490.D
Acq: 28 Mar 2019 5:33

Tgt Ion: 91 Resp: 100949
Ion Ratio Lower Upper
91 100
92 60.4 47.4 71.0





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.23 min Scan# 2891

Delta R.T. -0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

ClientSampleId :

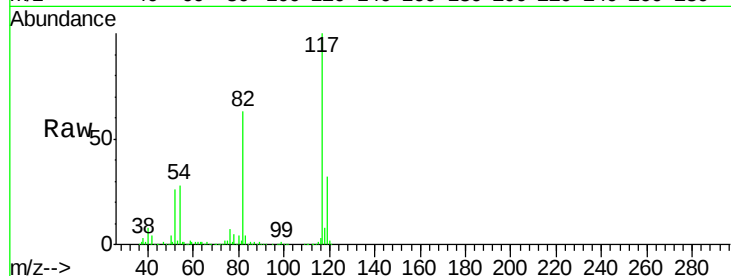
Tot Ion:117 Resp: 2033023

Ion Ratio Lower Upper

117 100

82 63.4 51.5 77.3

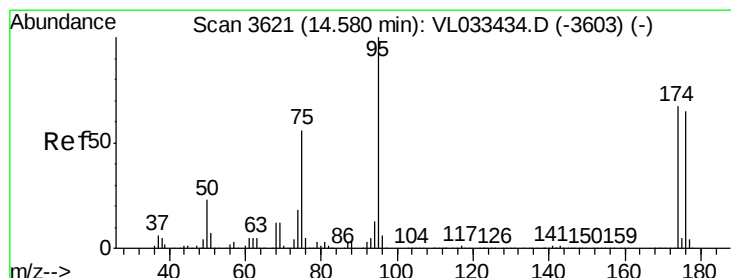
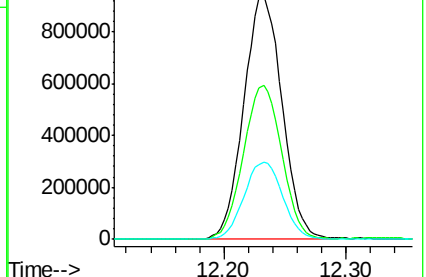
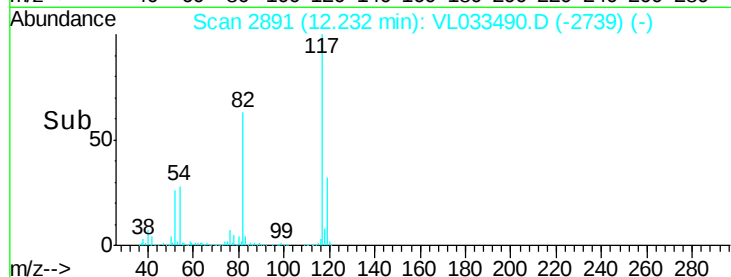
119 32.3 25.5 38.3



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.578 ppbv

RT: 14.57 min Scan# 3618

Delta R.T. -0.01 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

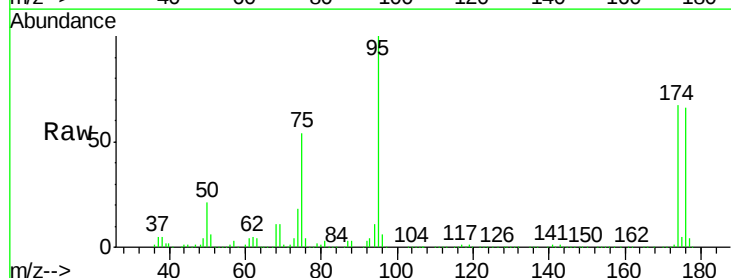
Tgt Ion: 95 Resp: 1526610

Ion Ratio Lower Upper

95 100

174 68.0 52.9 79.3

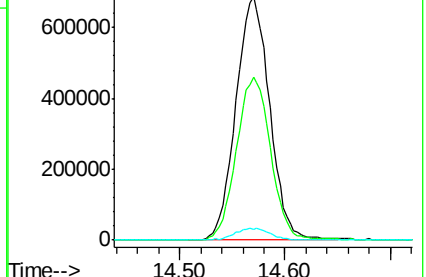
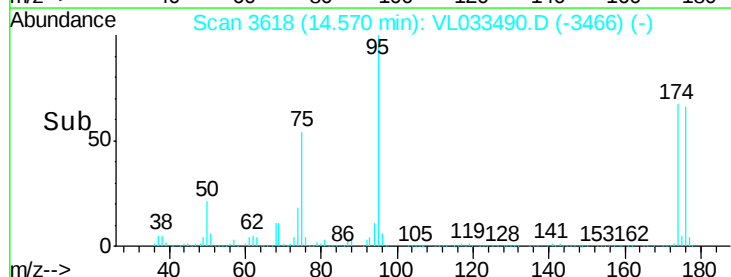
175 5.1 3.8 5.6

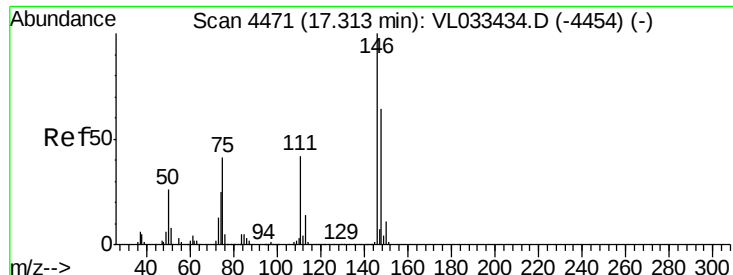


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#76

1,4-Dichlorobenzene

Concen: 0.021 ppbv

RT: 17.30 min Scan# 4466

Delta R.T. -0.02 min

Lab File: VL033490.D

Acq: 28 Mar 2019 5:33

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:146 Resp: 3400

Ion Ratio Lower Upper

146 100

111 0.0 21.7 65.1#

148 0.0 32.0 96.2#

